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Serial No.: 10/519,955

Confirmation No.: 7370

Applicant(s): Kasper Kokkonen

Group Art Unit: 1793

Examiner: Jie Yang

Filed: December 30, 2004

For: METHOD AND ARRANGEMENT FOR FEEDING AN ANODE INTO A
SMELTING REACTOR

APPLICANTS' APPEAL BRIEF UNDER 37 C.F.R. § 41.37

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Commissioner for Patents
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Sir:

Applicants filed a Notice of Appeal on August 25, 2009 along with a Pre-Appeal Brief and a Request for a Pre-Appeal Brief Conference. Applicants then received a Notice of Panel Decision from Pre-Appeal Brief Review on September 9, 2009. The Notice indicated that the application remains under appeal because there is at least one actual issue for appeal. Therefore, applicants timely present this Appeal Brief in the above-identified application in support of the Notice of Appeal filed August 25, 2009, and pursuant to 37 C.F.R. § 41.37.

This appeal is to the Board of Patent Appeals and Interferences from the Examiner's final rejection of claims 1-6 and 9-13.

Applicants respectfully request that the Brief be fully considered by the Board and that the Examiner's rejection of the claims be reversed for the reasons stated herein.

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I. REAL PARTY OF INTEREST

Outokumpu Oyj, a corporation doing business at Riihitontuntie 7, FIN-02200 Espoo, Finland, has acquired the entire right, title and interest in and to all inventions and discoveries disclosed in the above-referenced patent application. The assignment was recorded on December 30, 2004 at Reel/Frame: 016747 / 0574.

II. RELATED APPEALS AND INTERFERENCES

There are no other appeals or interferences which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

III. STATUS OF CLAIMS

Claims 1-6 and 9-18 are currently pending in the instant application. Rejected claims 1-6 and 9-13 are currently being appealed. Below is the status of the claims in the application.

Claims allowed: None.

Claims objected to: None.

Claims rejected and currently under appeal: 1-6 and 9-13.

Claims cancelled: 7-8.

Claims withdrawn from consideration: 14-18.

IV. STATUS OF AMENDMENTS

A response to the Final Office Action (under 37 C.F.R. § 116) was filed on June 4, 2009. The response included an amendment to claim 1 in addition to a cancellation of claims 7 and 8.

An Advisory Action was mailed on June 22, 2009 indicating that for purposes of appeal, the amendments were entered. Accordingly, this Appeal Brief is based on the claims as amended on June 4, 2009. A copy of the pending claims are found in section VIII below.

V. SUMMARY OF CLAIMED SUBJECT MATTER

There is one independent claim (claim 1) and 12 dependent claims (claims 2-6 and 9-13) involved in the appeal. The remaining pending claims have either been withdrawn or cancelled without prejudice. The following is a concise explanation of the invention of the claims referring to the page and line of the specification in brackets supporting the explanation. Additional support from Figure 1 is also provided with reference numbers indicated in parenthesis.

Claim 1 is directed to an apparatus for feeding an anode into a metallurgical smelting reactor [p.1, Ins. 3-4; FIG.1 (1)] in an essentially horizontal position [p.2, In. 33; FIG.1 (4) bottom of figure], said apparatus comprising: a bending element [p.3, In. 12; FIG.1 (5)] consisting of four rolling rollers [p.4, Ins. 5-6; FIG.1 (6)] configured to essentially completely bend the anode on both sides [p.3, Ins. 16-17] thereby providing the anode with a radius of curvature of about 1,000 – about 3,000 millimeters [p.4, Ins. 10-11], wherein each rolling roller has a diameter ranging from 100 — 500 millimeters [p.4, Ins. 31-33]; a feeding funnel located below the bending element made of at least

one part for feeding at least one anode at a time into the smelting reactor [p.3, Ins. 10-11; FIG.1 (7)]; wherein the apparatus is configured such that the essentially completely bent anode meets the surface of a melt contained in the smelting reactor in an essentially horizontal position [p.3, Ins. 9-14; FIG.1 (4) bottom of the figure].

Claim 2 requires the feeding funnel to be arranged in the immediate vicinity of the reaction shaft of the smelting reactor [p.3, Ins. 19-20].

Claim 3 requires the feeding funnel to be made of two parts: a top part and a bottom part, so that the angle of inclination of the top part with respect to the horizontal level is larger than that of the bottom part [p.3, Ins. 24-27].

Claim 4 requires that the angle between the top part and the bottom part of the feeding funnel is about 10 – 30 degrees [p.3, Ins. 29-31].

Claim 5 requires the feeding funnel to include a trajectory-shifting element in order to alter the trajectory of the anode [p.3, Ins. 31-33; FIG.1 (A)].

Claim 6 requires the distance between the bottom part of the feeding funnel and the surface of the melt contained in the reactor to be 0.8 – 1.3 meters [p.4, Ins. 2-4].

Claim 9 requires the anodes to be arranged to drop into the smelting reactor one by one [p.4, Ins. 15-16].

Claim 10 requires the anodes to be arranged to drop into the smelting reactor in batches of several anodes [p.4, Ins. 16-18].

Claim 11 requires the anode to be arranged to drop into the smelting reactor so that the anode grip brackets are pointed upwards [p.4, Ins. 18-20].

Claim 12 requires that in connection with the feeding funnel, there are provided at least two shutter elements for preventing the furnace atmosphere from leaking to the surroundings [p.4, Ins. 20-22; FIG.1 (12) and (14)].

Claim 13 requires the feeding funnel to be provided with elements for guiding the sliding direction of the anode [p.4, Ins. 22-24].

VI. GROUNDS FOR REJECTION TO BE REVIEWED ON APPEAL

The issue is whether claims 1-6 and 9-13 are unpatentable under 35 U.S.C. § 103 by US Patent No. 5,685,892 in view of US Patent No. 4,457,977.

VII. ARGUMENT

A. Rejections Under 35 U.S.C. §103

In the 4/8/2009 Final Office Action, claims 1-6 and 9-13 were rejected under 35 U.S.C. § 103(a) for allegedly being unpatentable over US Patent No. 5,685,892 ("US'892") and claims 7-8 were rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over US'892 and further in view of US Patent No. 4,457,977 ("US'977"). In response, applicants presented an amendment after final wherein claim 1 was amended to incorporate the elements of claims 7 and 8 along other claim amendments (see Amendment 6/4/2009, pages 2 and 6-7)¹. The Examiner entered the amendments in this response for purposes of appeal (Advisory Action 6/22/2009, Item 7).

In the Advisory Action, the Examiner rejected all the pending claims under U.S.C. § 103(a) for allegedly being unpatentable over US'892 in view of US'977. Applicants

¹ Applicants have provided citations to documents that are part of the file history of the instant application. These citations are provided to indicate amendments, arguments, Examiner statements, etc. that have previously been presented and are part of the record.

respectfully disagree because: (1) neither US'892 nor US'977 alone or in combination teach or suggest all of the elements required by the instant claims (see Amendment 6/4/2009, pages 8-10); (2) the Examiner incorrectly stated that "the applicant's [sic] arguments [sic] against the references individually, one cannot show nonobviousness by attacking references individually" (Advisory Action 6/22/2009, p.2 cont. 11); and (3) there is no motivation to combine US'892 and US'977 and a combination of these references does not produce the apparatus of the instant claims (Amendment 6/4/2009, pages 9-10).

B. Neither US'892 Nor US'977 Alone Or In Combination Teach Or Suggested All Of The Elements Required By The Instant Claims

i. US'892 Does Not Teach Rolling Rollers Or Completely Bending An Anode As Required By The Instant Claims

The Examiner admits that "US'892 does not explicitly teach bending the anode by four rolling rollers... [or that] the diameter of the rolling roller[s] are] 100 to 500 millimeters" (Advisory Action 6/22/09, p.2, cont. of 7). However, the Examiner contends that "US'892 teaches similar bending technique to change the anode sheet shape with different bending angles for same purpose feeding anode sheet..." (Id.). Applicants respectfully disagree with the Examiner's contentions.

First, the instant claims are directed to an apparatus that essentially completely bends an anode and feeds the "essentially completely bent anode" onto "the surface of a melt... in an essentially horizontal position" (Amendment 6/4/09, p. 8). In contrast, US'892 teaches feeding anodes into a smelting reactor by either a) dropping a bent anode into a smelting reactor in a vertical position or b) utilizing a jump rail to place an unbent anode in a horizontal position (Id.).

Second, applicants assert that US'892 does not teach a "similar bending technique" as argued by the Examiner (Advisory Action, p.2, cont. 11). Instead, US'892 discloses the use of a bending press (i.e., not rollers) to create a bend angle (i.e., not a radius of curvature) between 10° to 45° to change the trajectory of the anode after it enters the smelting reactor (Id. and Response 12/27/2007, p. 5).

Therefore, the Examiner's statement that the bending technique in US'892 is similar to the bending technique of the instant invention is incorrect. Therefore, US'892 does not teach or suggest each of the claim elements required by the instant claims.

ii. The Rolling Rollers Of The Instant Claims Are Functionally And Structurally Different Than The Rolling Rollers Of US'977

The Examiner relies on US'977 for allegedly teaching four rolling rolls that are used for performing roll bending on shape metal (Advisory Action, p.2, cont. 11). The Examiner states that "applying four rolling rollers to perform bending on metal is a well-known technique... [and] that the manner in which an apparatus operates is not germane to the issue of patentability of the apparatus it self [sic]" (Id.) (citing Ex parte Wikdahl, 10 USPQ 2d 1546, 1546 (BPAI 1989); Ex parte McCullough, 7 USPQ 2d 1889, 1891 (BPAI 1988); In re Finsterwalder, 168 USPQ 530 (CCPA 1971); In re Casey, 152 USPQ 235, 238 (CCPA 1967)) (Advisory Action, p.2, cont. of 11). Applicants respectfully disagree with the Examiner's contentions.

First, applicants assert that the apparatus of the instant claims and the apparatus disclosed in US'977 are functionally and structurally different. That is, the particular configuration (i.e., structure) of the apparatus of the instant claims is distinguishable from the apparatus of US'977. Thus, applicants respectfully disagree with the

Examiner's suggestion that there are only functional/operational differences, and not structural differences, between US'977 and the instant invention.

Second, it appears that the Examiner has separated the claimed apparatus into its individual components to argue that the operation of the apparatus is not germane to its patentability. By doing this, the Examiner has failed to consider the configuration of the apparatus as a whole for determining patentability. The instant claims are directed to an apparatus for essentially completely bending an anode and feeding the essentially completely bent anode into a metallurgical smelting reactor in an essentially horizontal position. (Amendment 6/4/2009, p. 8). The particular configuration (i.e., structure) of the apparatus as a whole (i.e., all of the components) are being claimed. Applicants assert that this configuration is distinguishable from US'892 and US'977 either alone or in combination.

The Examiner has cited to a number of cases to support the Examiner's position. However, in the cited cases the claims in dispute and the arguments presented are distinguishable from the instant claims and arguments presented herein. In particular, in the cases cited by the Examiner (Ex parte Wikdahl, Ex parte McCullough, In re Finsterwalder, and In re Casey), the Board found no structural difference between the claimed invention and the prior art. Additionally, the applicants in those cases tried to argue patentability by relying on differences between the intended function/use, or the manner or method in which the devices were to be utilized.

Instead, applicants assert herein that there are both functional and structural differences between the apparatus of the instant claims and the apparatuses disclosed in US'892 and US'977. Specifically, neither US'892 nor US'977 teach or suggest an

apparatus for (1) essentially completely bending an anode and (2) feeding the essentially completely bent anode into a metallurgical smelting reactor in an essentially horizontal position.

The Examiner further argues that “the amended features ‘essentially completely bending the anode on both sides with respect to the center of the anode...’ do not add patentability [sic] weight to the instant apparatus claims” (Advisory Action, p.2, cont. 11). As an initial matter, the Examiner has incorrectly quoted the amendment to claim 1. Specifically, the amendment recites:

a bending element consisting of four rolling rollers configured to essentially completely bend the anode on both sides thereby providing the anode with a radius of curvature of about 1,000 – about 3,000 millimeters, wherein each rolling roller has a diameter ranging from 100 — 500 millimeters (Amendment 6/4/2009, p. 2)

Therefore, it is not clear if the Examiner has properly considered the pending claims in making this argument and rejection.

Furthermore, the Examiner has failed to appreciate that the four rolling rollers of the apparatus must be configured to essentially completely bend the anode to provide the anode with a radius of curvature of about 1,000 – about 3,000 millimeters. Applicants assert that this is a structural feature and not a functional feature of the apparatus. That is, the particular configuration, size, and structure of the rolling rollers in the apparatus are required to provide an anode with the particular radius of curvature. This structural feature is distinct from the apparatus disclosed in US'977 which teaches a configuration of rolling rollers for completely bending metal into rings, loops, or rolls. The disclosure and figures of US'977 show that the configuration of the rollers are different than the configuration required by the instant claims.

Therefore, the rolling rollers of the instant claims are structurally and functionally distinct from the rolling rollers disclosed in US'977. Accordingly, US'892 or US'977 either alone or in combination do not teach or suggest each of the elements required by the instant claims.

iii. Modifying The Configuration Of The Rolling Rollers Of US'977 Would Destroy The Intended Function Of The Invention Disclosed In US'977

The title of US'977 is "Apparatus For Performing Roll Bending On Shape Metal" (emphasis added). US'977 discloses rollers that completely bend shape metal ("angle bar") into rings, loops, or rolls (Amendment 6/4/2009, p. 9). Additionally, US'977 states that "[t]he four rolls 1, 2, 3 and 4 of the roll bending apparatus are generally arranged as shown in FIG. 7" (col. 4, lines 46-47). FIG. 7 illustrates a configuration of rollers that would result in a distinctly different bend type and different bend angle than that required by the instant claims. This is further evidenced in FIG. 12 of US'977. In fact, none of the figures illustrate rolling rollers present in a configuration required by the apparatus of the instant claims.

In order to have the configuration of the rolling rollers required by the instant claims, a person would have to modify the configuration of the rollers described in US'977. Specifically, the rollers would have to be configured to produce bent metal with a radius of curvature of about 1,000 – about 3,000 millimeters. However, changing the configuration of the rollers of US'977 to produce this result would destroy the intended function of US'977. That is, if US'977 were modified in this manner, the rollers would no longer produce rings, loops, or rolls which is the intended function of US'977.

The US Patent and Trademark guidelines explicitly state:

If proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification.

M.P.E.P. § 2143.01(V).

Therefore, there would be no motivation for a person of skill in the art to modify US'977 in a manner suggested by the Examiner, because doing so would destroy the intended function of the invention disclosed in US'977. (Amendment 6/4/09, p. 10).

iv. The Diameter Of The Rolling Rollers Is Not Taught Or Suggested In US'892 Or US'977

Applicants assert that neither US'892 nor US'977 alone or in combination teach or suggest that "each rolling roller has a diameter ranging from 100 – 500 millimeters" as required by the instant claims. Specifically, US'892 does not teach rolling rollers and US'977 does not disclose any specific, or preferred, diameter of the rolling rollers.

The Examiner has argued that the diameter of the rolling rollers is a result-effective variable which is evidenced by US'977. (Advisory Action, p.2, cont. of 11). First, as stated above, a modification of the roller configuration disclosed in US'977 to the configuration of the instant claims would destroy the intended function of US'977. Second, the instant claims require the rolling rollers to have a particular diameter and to be "configured to essentially completely bend the anode on both sides thereby providing the anode with a radius of curvature of about 1,000 – about 3,000 millimeters" (Amendment 6/4/2009, p. 9). The diameter and structural configuration is not taught or suggested in US'977. Thus, contrary to the Examiner's contentions, US'977 does not provide any evidence that the claim element is a result-effective variable. Therefore, applicants assert that this feature is not a result-effective variable, and is not obvious in view of US'977.

Accordingly, the configuration of the rolling rollers described and illustrated in US'977 is distinct from the configuration and diameter of the rollers required by the instant claims. That is, the structure and function of the rollers of the instant invention are patentably distinct from US'977.

Therefore, neither US'892 nor US'977 alone or together teach the diameter of the rolling rollers required by the instant claims. Accordingly, neither US'892 nor US'977 alone or in combination teach or suggest every element required by the instant claims.

C. The Examiner Incorrectly States That Applicants Argued The References Individually

In the 6/22/2009 Advisory Action, the Examiner states that the applicants only argued the references individually (Advisory Action, p.2, cont. of 11). Applicants respectfully disagree and point to the 6/4/2009 Amendment where arguments were presented for the references in combination: page 8, lines 11-12 and 21-22; page 9, lines 1-2, 9-11, and 18; page 10, lines 13-14, 16-17, 19-22.

Specifically, page 8 of the response states: "Neither Ikoma nor Murakami alone or in combination teach or suggest the apparatus as claimed in claim 1" (emphasis added). Also, page 9 states "neither Ikoma nor Murakami teach or suggest an apparatus configured to essentially completely bend an anode with a radius of curvature of about 1,000 – about 3,000 millimeters. * * * Murakami does not remedy the deficiencies of Ikoma...." Also, on page 10 of the response, the applicant presents arguments showing that the references in combination do not teach or suggest the instant claims. Therefore, the applicant asserts that the response filed on June 4, 2009 properly provides arguments against the references in combination.

Therefore, applicants have properly presented arguments showing that the cited references either alone or in combination do not teach or suggest the instant claims.

D. A Combination Of US'892 and US'977 Does Not Produce The Apparatus Claimed In The Instant Claims

i. There Is Insufficient Motivation To Combine US'892 With US'977

Applicants assert that there is insufficient motivation to combine US'892 with US'977. Moreover, a person of ordinary skill in the art would not combine these references to produce the instant invention.

First, as stated in section B(iii) above, changing the configuration of the rolling rollers of US'977 would destroy the intended function of the invention disclosed in US'977. The US Patent and Trademark Office guidelines explicitly state that there would be no motivation or guidance to make the modification suggested by the Examiner. Accordingly, applicants assert that a person of ordinary skill in the art would not be motivated to modify US'977 and combine it with US'892 to produce the apparatus claimed in the instant claims.

Second, US'977 has absolutely no relevance to the problem addressed by the instant claims. US'977 is directed to bend rolling metal to form rings, loops, and rolls, whereas the instant invention is directed to an apparatus for essentially completely bending an anode and feeding the essentially completely bent anode into a smelting reactor in an essentially completely horizontal position. The Examiner's reliance on US'977 to remedy the deficiencies of US'892 is improper and contrary to controlling Federal Circuit authority.

[T]he purposes of both the invention and the prior art are important in determining whether the reference is reasonably pertinent to the problem the invention attempts to solve... If [the reference] is directed to a different purpose, the inventor would accordingly have had less motivation or occasion to consider it.

In re Clay, 23 USPQ 2d 1058, 1061 (Fed. Cir. 1992).

Therefore, a person of ordinary skill in the art would not be motivated to combine US'893 with US'977 to produce the instant invention.

ii. A Combination Of US'892 with US'977 Would Not Produce The Apparatus Of The Instant Claims

Applicants assert that a combination of US'892 with US'977 would not produce the apparatus of the instant claims. Thus, an obviousness rejection based on these references is improper.

First, US'892 does not disclose essentially completely bending the anode with any radius of curvature. Instead, US'892 uses a bending press (i.e., not rollers) to bend one end of the anode to create a bend angle (i.e., not a radius of curvature). Additionally, the purpose of the bend in US'892 is to perturb the fall trajectory after the anode reaches the surface of the melt. This is distinct from the instant claims which require an essentially bent anode to reach the surface of the melt in an essentially horizontal position.

Furthermore, the instant claims are directed to an apparatus that essentially completely bends and anode and feeds the "essentially completely bent anode" onto "the surface of a melt... in an essentially horizontal position" (Amendment 6/4/09, p. 8). In contrast, US'892 teaches feeding anodes into a smelting reactor by either a) dropping a bent anode into a smelting reactor in a vertical position or b) utilizing a jump rail to place an unbent anode in a horizontal position (Id.).

Additionally, US'977 does not remedy the deficiencies of US'892 because the rollers in US'977 are in a different configuration compared to the instant invention (compare US'977 FIG. 7 with present application Fig.1). Additionally, section B(ii) above provides detailed arguments illustrating that the rolling rollers of the instant claims are functionally and structurally different than the rolling rollers of US'977. Furthermore, section B(iii) above provides detailed arguments illustrating that a modification of the configuration of the rolling rollers of US'977 would destroy the intended function of the invention disclosed in US'977. Thus, combining US'977 with US'892 would not produce the apparatus of the instant claims.

Therefore, a person of ordinary skill in the art would not be motivated to modify US'977 in the manner required by the instant claims and a combination of US'892 with US'977 would not result in the instant claims. Accordingly, the 35 U.S.C. § 103(a) rejection to the instant claims is improper and should be withdrawn.

E. Summary

Claim 1 is not obvious over US'892 in view of US'977 for at least the reasons stated above. Reconsideration and withdrawal of the rejections to claims 1-6 and 9-13 under 35 U.S.C. §103(a) is respectfully requested. Applicants have not individually addressed rejection of the dependent claims 2-6 and 9-13, because applicants submit that independent claim 1 from which they directly or indirectly depend is in condition for allowance as set forth above.

CONCLUSION

Based on the foregoing amendments and remarks, Applicants respectfully request reconsideration and withdrawal of the rejection of claims and allowance of this application.

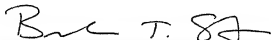
AUTHORIZATION

The Commissioner is hereby authorized to charge any additional fees which may be required for consideration of this Amendment to Deposit Account No. **504827**, Order No. 1004350.119US.

In the event that an extension of time is required, or which may be required in addition to that requested in a petition for an extension of time, the Commissioner is requested to grant a petition for that extension of time which is required to make this response timely and is hereby authorized to charge any fee for such an extension of time or credit any overpayment for an extension of time to Deposit Account No. **504827**, Order No. 1004350.119US.

Respectfully submitted,
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VIII. CLAIMS APPENDIX

The following claims were presented in the Amendment After Final filed June 4, 2009 and entered by the Examiner.

1. (Previously presented) An apparatus for feeding an anode into a metallurgical smelting reactor in an essentially horizontal position, said apparatus comprising:

a bending element consisting of four rolling rollers configured to essentially completely bend the anode on both sides thereby providing the anode with a radius of curvature of about 1,000 – about 3,000 millimeters, wherein each rolling roller has a diameter ranging from 100 — 500 millimeters;

a feeding funnel located below the bending element made of at least one part for feeding at least one anode at a time into the smelting reactor;

wherein the apparatus is configured such that the essentially completely bent anode meets the surface of a melt contained in the smelting reactor in an essentially horizontal position.

2. (Previously presented) An apparatus according to claim 1, wherein the feeding funnel is arranged in the immediate vicinity of the reaction shaft of the smelting reactor.

3. (Previously presented) An apparatus according to claim 1, wherein the feeding funnel is made of two parts: a top part and a bottom part, so that the angle of

inclination of the top part with respect to the horizontal level is larger than that of the bottom part.

4. (Previously presented) An apparatus according to claim 3, wherein an angle between the top part and the bottom part of the feeding funnel is about 10 – 30 degrees.

5. (Previously presented) An apparatus according to claim 1 wherein the feeding funnel is provided with a trajectory-shifting element in order to alter the trajectory of the anode.

6. (Previously presented) An apparatus according to claim 3, wherein the distance between the bottom part of the feeding funnel and the surface of the melt contained in the reactor is 0.8 – 1.3 meters.

7. (cancelled)

8. (cancelled)

9. (Previously presented) An apparatus according to claim 1, wherein the anodes are arranged to drop into the smelting reactor one by one.

10. (Previously presented) An apparatus according to claim 1, wherein the anodes are arranged to drop into the smelting reactor in batches of several anodes.

11. (Previously presented) An apparatus according to claim 1, wherein the anode is arranged to drop into the smelting reactor so that the anode grip brackets are pointed upwards.

12. (Previously presented) An apparatus according to claim 1, wherein in connection with the feeding funnel, there are provided at least two shutter elements for preventing the furnace atmosphere from leaking to the surroundings.

13. (Previously presented) An apparatus according to claim 1, wherein the feeding funnel is provided with elements for guiding the sliding direction of the anode.

14. (withdrawn) A method for feeding an anode into a metallurgical smelting reactor comprising:

feeding at least one anode at a time through a feeding funnel, the feeding tunnel being made of at least one part;

bending the anode essentially completely by means of a bending element, so that the anode meets the surface of the melt contained in the smelting reactor at an essentially horizontal position; and

bending the anode in the bending element so that the obtained radius of curvature for the anode is essentially 1,000-3,000 millimeters.

15. (withdrawn) A method according to claim 14, wherein the bending element is made of four rolling rollers with a diameter of 100 – 500 millimeters.

16. (withdrawn) A method according to claim 15, wherein the anodes are dropped into the smelting reactor one by one.

17. (withdrawn) A method according to claim 15, wherein the anodes are dropped into the smelting reactor in batches of several anodes.

18. (withdrawn) A method according to claim 15, wherein the anode drops into the smelting reactor so that the anode grip brackets are pointed upwards.

IX. EVIDENCE APPENDIX

None.

X. RELATED PROCEEDINGS APPENDIX

None.